

IN THE SPECIFICATION:

Please amend the following paragraphs as indicated:

[0018] Figure 2 further shows a first data 44 block being modulated with the carrier signal at the first frequency f_1 , a second data 44 block being modulated at the second frequency f_2 , and a third data 44 block being modulated with the third frequency f_3 . Various modulation techniques can be used. For example if FSK is used then the resulting signals have an increased frequency when the binary number of the data 44 block is a one. The binary number of zero produces a portion of the signal having a lower frequency. By transmitting the data blocks 48, 50, 52 at pseudo-random frequency channels, the reliability of the communications is improved as the signal is not easily jammed or disrupted. [[.]]

[0022] Frequency hopped spread spectrum communication makes the signal resistant to noise, interference, and security breaches. Spread spectrum enables multiple users 11[[s]] to share radio frequencies at the same time, without interfering with each other. The transmitted signal is spread over a frequency much wider than the minimum bandwidth required to send the signal. The frequency band is divided into channels and increasing the transmitted signal bandwidth results in an increased reception of the signal. Process gain is the concentration of signal strength in a given direction. In dividing the data 44 into channels, Claude Shannon's equation for channel capacity is as follows:

$$C=W \log_2 (1 + S/N)$$

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[0026] A hopping code, generated by the PN code generator, determines the frequencies the radio will transmit and in which order. To properly receive the signal, the receiver 24 must be set to the same hopping code and listen to the incoming signal at the right time and at the correct frequency. FCC regulations require 75 or more frequencies per transmission channel with a maximum dwell time of 400 ms. If the device encounters interference on one frequency, then the device will retransmit the signal on a subsequent hop on another frequency. Because of the nature of its modulation technique, frequency hopping can achieve up to 2 Mbps data rates.

[0038] Preferably, the signal strength of the RF signal is measured in decibels. The system measures signal strength relative to some type of reference signal. One type of measurement power is decibels relative to 1 mW dBm. $S_{dBm} = 10 \log_{10} P/1mW$